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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Juanita Parris

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EXAMINER

MCCLENDON, SANZA L

ART UNIT

PAPER NUMBER

1796

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10/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/034,005	Applicant(s) PARRIS ET AL.	
	Examiner Sanza L. McClendon	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/02/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 25-52 is/are allowed.
- 6) ☒ Claim(s) 1-2, 6, 8-9, 11-13, 15, 19-24 is/are rejected.
- 7) ☒ Claim(s) 3-5, 7, 10, 14 and 16-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. In response to the Arguments received on 6/02/2008, the examiner has carefully considered the arguments. The claim rejection under 35 U.S.C. § 112, 2nd paragraph for claims 1-52 have been overcome by the applicant's arguments and supporting evidence and has hereby been withdrawn for consideration.
2. It is noted that the BPAI procedurally reversed the previous stated rejection of claims as found in the Final Office action, mailed 12/01/2005. However the BPAI decision clearly states that said rejections were not rejected based on the merits of the rejection but because of the "at the time" it was unclear of the scope and the breadth of the claims based on the definitions for the claimed terms hydrophilic monomer and hydrophobic monomer. Now that these terms have been rendered clear to one of ordinary skill in the art based on applicant's arguments and supporting evidence, the examiner deems that the previous rejections still are applicable to the instantly written claims. Therefore said rejections are being re-instated on the record--please see below.

Claim Rejections - 35 USC § 102/ 35 USC § 103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 12-13, and 19-24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Scheibelhoffer et al (5,670,561).

6. Scheibelhoffer et al discloses a color concentrate (universal base composition) comprising (a) at least one resin selected from the group consisting of a polymer as defined in the abstract, (b) at least one resin selected from the groups consisting of a polymer as defined in the abstract, and (c) at least one colorant. Please note applicant's claims do not exclude other components, such as the (b) found in the reference. As an (a) component resin Scheibelhoffer et al sets forth low molecular weight styrene-maleic anhydride copolymers can be used. The molecular weight can be as low as 1500—see line 55 in column 5. This molecular weight is found within the range of the molecular weight range of claim 19. It is deemed that styrene meets applicant's definition of hydrophobic as can be seen per specification at page 5, while the maleic anhydride meets the definition of hydrophilic as can be seen per specification at page 5. Scheibelhoffer et al additionally sets forth styrene/acrylonitrile, styrene/acrylic acid and styrene/methacrylic acid copolymers—see column 5, lines 65-67. In describing component (a) Scheibelhoffer et al teaches said resin generally are solid at room temperature and have softening point of from about 60 °C to about 200 °C. Thus claim 20 is read in the reference. Scheibelhoffer et al sets forth said (b) component can also be a polymer of a vinyl aromatic having a molecular weight of at least 10,000. This reads on claim 19. Examples include styrene/maleic anhydride copolymers, as well as, styrene/acrylonitrile copolymers—see column 7, lines 17-34. When styrene/maleic anhydride polymers are used it can be assumed that both hydrophobic and hydrophilic portions comprise at least 20% of the total weight of the resin since first they are the only two components, please note that at least 20% includes up to 100% of the resin. Claim 1 section (b) is read in the reference. Per column 5, lines 58-64, Scheibelhoffer et al sets forth sulfonated copolymers of styrene/maleic anhydride comprising at least 50% up to about 75% styrene, when using this copolymer as an example the ratio of hydrophobic monomer to hydrophilic monomer is within the ratio as set forth by claim 1, i.e. 1:1 or 3:1. The styrene/acrylic acid copolymers set forth by Scheibelhoffer et al reads on the

acrylic copolymer of claims 2 and 12-13. Scheibelhoffer et al sets forth the color concentrate may included additives such as heat stabilizers, UV stabilizers and surfactants, wherein surfactants are taught to be an optional additive. The pigment is present in amounts from 22-95% by weight and may be inorganic or organic in nature, when inorganics are used applicant limitation of dry color form is met.

Scheibelhoffer et al sets forth the use of styrene/maleic anhydride copolymers as useable for both (a) and (b) components in the color concentrate, although Scheibelhoffer et al does not expressly teach said copolymers are soluble in both water and organic solvent said copolymers meet the definition as set forth by the claims. Thus the copolymers must inherently be soluble in both. Because the Patent and Trademark Office is not equipped to conduct experimentation in order to determine whether Applicant's composition differs and, if so, to what extent, from the discussed reference. Therefore, with the showing of the reference, the burden of establishing non-obviousness by objective evidence is shifted to the Applicants.

7. Claims 1-2, 9-11, 19 and 21-24 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takahashi et al (4,234,466).

Takashi et al sets forth a method of making solid pigment dispersion, i.e. solventless universal based composition. Said dispersion comprises an ethylenically unsaturated compound, a resin, and a pigment, wherein the resin is soluble in the monomer. Said ethylenically unsaturated monomer can be considered an organic solvent, albeit reactive solvent. Note applicants claimed organic solvent reads on both reactive and inert solvents. Thus the resin is soluble in organic solvent. Said dispersion comprising the monomer, resin and pigment is subjected to suspension or bulk polymerization to produce a higher stability of suspension particles, which are of great advantage because the polymerization can proceed smoothly and the washing of the product can be preformed with ease--see column 5, lines 33-44. Takashi et al sets forth additives can be added to the composition before, during or after the suspension polymerization, such as other pigments, moisturizing agents, flow control agents, curing agents, or antioxidants--see column 4, lines 37-43.

Column 5 further sets forth that it is advantageous that the liquid dispersion, at this point, is viscous because the ethylenically unsaturated compound having functional groups such as carboxyl, hydroxyl, hydroxymethyl or alkoxymethyl and being soluble in water is prevent from

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the removal into an aqueous phase during suspension polymerization, which may result in lowering the loss of the starting materials and maintaining good stability of the suspended particles—see lines 44-52. The examiner deems that it stands to reason that if the resin comprises at least some of the same groups (during and/or after the suspension polymerization), i.e., hydrophilic groups which are soluble in water, than the resin is also soluble, at least partly, in water, which will additionally help in the stability of the suspended particles—see example 2 and the following paragraph below.

Takashi et al per example 2 sets forth a polymer ester resin, as previously described in earlier office actions, comprising both hydrophilic and hydrophobic monomers. Said hydrophilic monomers comprise trimethylolpropane, thioglycolic acid, and neopentyl glycol and said hydrophobic monomer would be the phthalic anhydride. Per instant claim the weight ratio of hydrophobic to hydrophilic is 1/5 to 5, which includes the total of all hydrophobic to all hydrophilic monomers present in the resin. The ratio of hydrophobic monomers (55 parts by weight) to hydrophilic monomers ($5 + 28 + 19.7 = 52.7$ total by weight) results in a ratio of 1.04 which is well within the instantly claimed ratio. Thus, the examiner deems the instantly claimed invention is read in the reference. However, in the alternative, since the Patent and Trademark Office is not equipped to conduct experimentation in order to determine whether Applicant's composition differs and, if so, to what extent, from the discussed reference. Therefore, with the showing of the reference, the burden of establishing non-obviousness by objective evidence is shifted to the Applicants.

8. Claims 1-2, 6, 8-9, 11-12, 15, 19-20 and 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 116666 as evidenced by Thomm et al (3,846,507) and Login (4,098,741).

9. EP 116666 discloses a method of making a color concentrate, i.e., a solventless universal base composition, comprising dispersing a pigment in a resin wherein the resin is obtained from both hydrophobic monomers and hydrophilic monomer that are soluble in both water and organic solvents. The pigment is present in the color concentrate in amounts from 1 to 70% and is in the form of a presscake. The resin has a softening temperature of 130 to 350 °C. EP'666 discloses the resins can include acrylic resin comprising hydrophobic and

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hydrophilic monomer in a ratio, for instance of 4/1 (example 15), as well as, polyamide and polyester resins. When discussing the use of specific types of polyamides and polyesters in the examples, EP'666 refers to Thomm et al and Login, respectively. Example 2 of Thomm et al discloses polyamides made from hydrophobic and hydrophilic monomers present in ratio approximately 0.70 (232 + 116)/ (226 – 268). Login discloses the use of polyester which have acid numbers from 5 to 15 and molecular weights of 4000 to 11,000 (col. 5, lines 15-19), which are obtained from hydrophobic and hydrophilic monomers in a ratio of 1.14/1 (598/ (467 + 56.8))—see example 1.

Allowable Subject Matter

10. Claims 3-5, 7, 10, 14, and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The above claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims for the following reasons.

Scheibelhoffer et al. (U.S. 5,670,561) disclose method of making color concentrate comprising dispersing a pigment in acrylic resin, Takahashi et al. (U.S. 4,234,466) disclose method of making solid pigment dispersion comprising dispersing a pigment into polyester, and EP 116666 each disclose method of making color concentrate comprising dispersing a pigment in acrylic resin, polyamide or polyester. However, there is no disclosure in any of the references of dispersing a pigment in polyurethane which is obtained from hydrophobic monomer and hydrophilic monomer as required in present claims 3-5 or in copolymer which is urethane-amide or urethane-ester which is obtained from hydrophobic monomer and hydrophilic monomer as required in present claim 14. Further, while Takahashi et al. and EP 116666 disclose the use of polyamide and/or polyester, there is no disclosure in either reference that the total weight of the hydrophobic monomer and hydrophilic monomer in the polyamide is 40-60% and in the polyester is 50-70% as required in present claims 7 and 10, respectively.

Additionally, all the references are silent with respect to the amine number of the resin as required in present claims 17-18 while Scheibelhoffer et al. and Takahashi et al. are silent with respect to the acid number of the resin. While EP 116666 discloses that the acid number of

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the polyester is 5-15, this falls outside the scope of present claim 16, which requires acid number of 30-500.

11. Claims 25-52 are allowable over the "closest" prior art Scheibelhoffer et al. (U.S. 5,670,561), Takahashi et al. (U.S. 4,234,466), and EP 116666 given that Scheibelhoffer et al. disclose that the color concentrate is used to color plastic, Takahashi et al. disclose that the solid pigment dispersion is used to color plastic or powdery paint, and EP 116666 discloses that the color concentrate is used to color synthetic textile fibers. Thus, there is no disclosure or suggestion in any of the references of method comprising dissolving the color concentrate or solid pigment dispersion into water or organic solution. Further, it is noted that there is no disclosure or suggestion of ink.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sanza L McClendon/
Primary Examiner,
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